

Title (en)

Nitride semiconductor and fabricating method thereof

Title (de)

Nitrid-Halbleitervorrichtung und Herstellungsverfahren dafür

Title (fr)

Dispositif semi-conducteur au nitrure et son procédé de fabrication

Publication

EP 2701199 A3 20170621 (EN)

Application

EP 13003662 A 20130722

Priority

KR 20120091936 A 20120822

Abstract (en)

[origin: EP2701199A2] A semiconductor device is capable of reducing a leakage current by providing a first layer (110) including a plurality of GaN layers (111) and Fe x N y layers (112) interposed between the plurality of GaN layers. The semiconductor device comprises the first layer (110), an AlGaIn layer (120), a second GaN layer (130), a gate electrode (140), a source electrode (150) and a drain electrode (160) which are deposited in a sequential manner.

IPC 8 full level

H01L 21/02 (2006.01); **H01L 21/338** (2006.01); **H01L 29/267** (2006.01); **H01L 29/778** (2006.01); **H01L 29/20** (2006.01); **H01L 29/207** (2006.01); **H01L 29/36** (2006.01)

CPC (source: EP KR)

H01L 21/02439 (2013.01 - EP); **H01L 21/02458** (2013.01 - EP KR); **H01L 21/02507** (2013.01 - EP KR); **H01L 21/02513** (2013.01 - EP); **H01L 21/0254** (2013.01 - EP KR); **H01L 21/02579** (2013.01 - EP KR); **H01L 21/02581** (2013.01 - EP KR); **H01L 21/0262** (2013.01 - EP KR); **H01L 29/1075** (2013.01 - KR); **H01L 29/2003** (2013.01 - KR); **H01L 29/267** (2013.01 - EP KR); **H01L 29/66462** (2013.01 - EP KR); **H01L 29/7786** (2013.01 - EP KR); **H01L 29/1075** (2013.01 - EP); **H01L 29/2003** (2013.01 - EP); **H01L 29/207** (2013.01 - EP)

Citation (search report)

[A] CORDIER ET AL: "AlGaIn/GaN HEMTs regrown by MBE on epi-ready semi-insulating GaN-on-sapphire with inhibited interface contamination", JOURNAL OF CRYSTAL GROWTH, ELSEVIER, AMSTERDAM, NL, vol. 309, no. 1, 31 October 2007 (2007-10-31), pages 1 - 7, XP022323971, ISSN: 0022-0248, DOI: 10.1016/J.JCRYSGRO.2007.09.023

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

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DOCDB simple family (application)

EP 13003662 A 20130722; JP 2013168616 A 20130814; KR 20120091936 A 20120822